

WHAT IS CLAIMED IS:

1. A bottling plant for bottling beverages, said bottling plant comprising:

a bottle rinsing section for rinsing bottles;

a bottle filling section to receive bottles for filling;

a bottle capping section for capping bottles;

a product stabilizing section for stabilizing the content of the bottles;

said product stabilizing section comprising:

a plurality of spray arrangements, each of said plurality of spray arrangements being configured and disposed to spray liquid over at least one bottle;

a plurality of tank arrangements configured to receive liquid from said plurality of tanks and to supply liquid to said plurality of tanks;

an arrangement interconnecting said plurality of spray arrangements, said plurality of tanks, and said plurality of tank arrangements among one another to adjust characteristics and flow of liquid circulating in said product stabilizing section in response to interruptions of movement of bottles in said product stabilizing section;

a housing;

said housing comprising a roof, an inlet for the containers, and an outlet for the containers;

said roof of said housing comprising the roof for said housing and said plurality of spray arrangements;

a first portion configured to heat the product in containers by a first heated spray of liquid, said first spray of liquid comprising a predetermined first temperature to bring the product in containers to a temperature below the pasteurization temperature;

a second portion configured to pasteurize the product

in containers by a second spray of liquid, said second spray of liquid comprising a predetermined second temperature to impart to the product in containers a predetermined unit of pasteurization;

a third portion configured to cool the product in containers by a third spray of liquid, said third spray of liquid comprising a temperature to bring the product in containers to a temperature below said first temperature;

said second portion succeeding said first portion;

said third portion succeeding said second portion; and

apparatus to move the containers in succession from said inlet to said outlet in a flow of containers through the successive portions, at least for heating, pasteurizing and cooling by way of respective sprays of fluid which sprays cover them with respective sprays of liquid.

2. A pasteurization unit for pasteurizing products in containers in a flow of containers through successive sections at least for heating, pasteurizing and cooling by means of fluid covering them, such as by trickling over them, or spraying over them, or subjecting them to a spray, with a pasteurizer housing and spray devices located inside it, characterized by the fact that the roof (21) of the pasteurizer housing (18) is realized in the form of a roof sprayer and forms both the roof (21) and the spray devices (22).

3. The pasteurization unit as claimed in Claim 2, characterized by the fact that the roof (21) is realized in the form of shaped spray channels (24) located next to one another.

4. The pasteurization unit as claimed in Claim 3, characterized by the fact that the spray channels (24) are open on top and can be closed with an individual and/or common cover (25).

5. The pasteurization unit as claimed in Claim 4, characterized by the fact that the covers (25) can be attached in

sections to the spray channels and are mounted so that they can be folded away from them.

6. The pasteurization unit as claimed in Claim 5, characterized by the fact that the covers (22) themselves form the spray devices and can be attached to a frame and/or to the side walls in the form of a roof cover.

7. Pasteurization unit as claimed in Claim 6, characterized by the fact that the spray channels (24) are realized in a serpentine shape and are run in alternating conical directions individually or in groups, so that a first spray channel or a first group of spray channels can be charged with the fluid to be sprayed from a first side, and the individual channel or group of such channels that lies next to the first channel or group is conical in the opposite direction and can be charged with the fluid to be sprayed from the second side.

8. The pasteurization unit as claimed in Claim 7, characterized by the fact that the lower portion of the roof that contains the spray opening is straight an/or flat and the upper part provided as a roof cover for the injection channels forms the actual spray channels, and can be connected in a sealed manner with the lower part of the roof.

9. A bottling plant for bottling beverages, said bottling plant comprising:

a bottle rinsing section for rinsing bottles;

a bottle filling section to receive bottles for spraying and to fill bottles with liquid;

a bottle capping section for capping bottles;

a bottle stabilizing section for stabilizing bottles, said bottle stabilizing section comprising:

a housing;

said housing comprising a roof, an inlet for bottles, and an outlet for bottles,

~~a plurality of spray arrangements, each of said plurality of spray arrangements being configured and disposed to spray liquid over at least one bottle; said roof comprising the roof for said housing and said plurality of spray arrangements;~~

~~a plurality of tanks, said plurality of tanks being disposed to capture liquid from said plurality of spray arrangements;~~

~~a plurality of tank arrangements configured to receive liquid from said plurality of tanks and to supply liquid to said plurality of tanks;~~

~~an arrangement interconnecting said plurality of spray arrangements, said plurality of tanks, and said plurality of tank arrangements among one another to adjust characteristics and flow of liquid circulating in said bottle stabilizing section in response to interruptions of movement of bottles in said bottle stabilizing section.~~

10. A method of operating a bottling plant, said bottling plant comprising: a bottle rinsing section for rinsing bottles; a bottle filling section to receive bottles for filling; a bottle capping section for capping bottles; a product stabilizing section for stabilizing the content of the bottles; said product stabilizing section comprising: a plurality of spray arrangements, each of said plurality of spray arrangements being configured and disposed to spray liquid over at least one bottle; a plurality of tank arrangements configured to receive liquid from said plurality of tanks and to supply liquid to said plurality of tanks; an arrangement interconnecting said plurality of spray arrangements, said plurality of tanks, and said plurality of tank arrangements among one another to adjust characteristics and flow of liquid circulating in said product stabilizing section in response to interruptions of movement of

bottles in said product stabilizing section; a housing; said housing comprising a roof, an inlet for the containers, and an outlet for the containers; said roof of said housing comprising the roof for said housing and said plurality of spray arrangements; a first portion configured to heat the product in containers by a first heated spray of liquid, said first spray of liquid comprising a predetermined first temperature to bring the product in containers to a temperature below the pasteurization temperature; a second portion configured to pasteurize the product in containers by a second spray of liquid, said second spray of liquid comprising a predetermined second temperature to impart to the product in containers a predetermined unit of pasteurization; a third portion configured to cool the product in containers by a third spray of liquid, said third spray of liquid comprising a temperature to bring the product in containers to a temperature below said first temperature; said second portion succeeding said first portion; said third portion succeeding said second portion; and apparatus to move the containers in succession from said inlet to said outlet in a flow of containers through the successive portions, at least for heating, pasteurizing and cooling by way of respective sprays of fluid which sprays cover them with respective sprays of liquid;

said method comprising:

rinsing bottles in said bottle rinsing section;

filling bottles in said bottle capping section;

stabilizing product in bottles in said bottle stabilizing section;

said stabilizing comprising pasteurization to a predetermined pasteurization unit from said roof comprising said plurality of spray arrangements; and

shipping pasteurized bottles.